ABSTRACT

An object of the present invention is to provide a method for effectively producing a triarylsulfonium salt having a structure that only one aromatic ring of three aromatic rings on the cation portion thereof is different from the other two aromatic rings (hereinafter, abbreviated as a triarylsulfonium salt relating to the present invention) in a high yield without forming any byproduct. The present invention relates to a method for producing a triarylsulfonium salt represented by the general formula [4]:

$$R^{-1}$$
 $R-S$
 A_1
 R^{-1}
 R^{-1}

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wherein, two R¹'s represent each hydrogen atom, halogen atom, alkyl group, haloalkyl group having 1 to 4 carbon atoms, alkoxy group, acyl group, hydroxyl group, amino group, nitro group or cyano group; R represents an aryl group which may have a substituent selected from a halogen atom, an alkyl group, a haloalkyl group having 1 to 4 carbon atoms, an alkoxy group, an alkylthio group, a N-alkylcarbamoyl group and a carbamoyl group, and the above substituent is different from one represented by the above R¹; and A¹ represents a strong acid residue,

comprising reacting a diaryl sulfoxide represented by the general formula [1]:

$$\mathbb{R}^{1} \xrightarrow{\mathbb{I}} \mathbb{R}^{1} \qquad [1]$$

wherein, R1 represents the same as above,

and an aryl Grignard reagent represented by the general formula [2]: RMgX [2]

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wherein, X represents a halogen atom; R represents the same as above, in the presence of an activator with high affinity for oxygen of 3 to 7.5 equivalents relative to the above diaryl sulfoxide, and then reacting the resultant reaction mixture with a strong acid represented by the general formula [3]:

 HA_1 [3]

wherein, A_1 represents the same as above, or a salt thereof.